

**ENTERED**

April 24, 2019

David J. Bradley, Clerk

**IN THE UNITED STATES DISTRICT COURT  
FOR THE SOUTHERN DISTRICT OF TEXAS  
HOUSTON DIVISION**

DEEP FIX, LLC,	§	
Plaintiff,	§	
	§	
v.	§	CIVIL ACTION NO. H-18-0948
	§	
MARINE WELL CONTAINMENT	§	
COMPANY, LLC,	§	
Defendant.	§	

**MEMORANDUM AND ORDER ON CLAIM CONSTRUCTION**

This patent case is before the Court for construction of the disputed claim terms in United States Patents No. 8,833,393 (“the ’393 Patent”) (the “Patent-in-Suit”), titled “Cap Valve.” Plaintiff Deep Fix, LLC (“Deep Fix”) alleges that Defendant Marine Well Containment Company, LLC (“MWCC”) is infringing the Patent-in-Suit.

The Court conducted a hearing pursuant to *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996) (“*Markman* hearing”), on April 3, 2019. Based on the evidence before the Court, the arguments presented by counsel orally and in writing, and the governing legal authorities, the Court issues this Memorandum and Order construing those disputed claim terms that require construction.<sup>1</sup>

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<sup>1</sup>The parties have agreed on the proper construction of two previously disputed claim terms. See Joint Submission re Claim Construction [Doc. # 117], p. 1. The Court adopts the parties’ agreed construction of the claim term “a cylindrical valve chamber” in Claims 1 and 10 to mean “a valve component having a cylindrical hollow cavity.” The Court adopts the parties’  
(continued...)

## **I. BACKGROUND**

Charles Adams is the sole inventor of the cap valve covered by the '393 Patent. Through a series of assignments, Deep Fix asserts sole ownership of all interest in the '393 Patent.

MWCC is a consortium of oil and gas companies including ExxonMobil, British Petroleum ("BP"), and others. MWCC manufactures oil and gas well containment systems used in well blowout situations.

Drilling an offshore well involves connecting a line from a drilling rig, through a well bore, to an oil or gas reservoir beneath the sea floor. *See* MWCC's Technical Tutorial [Doc. # 69], p. 1. An uncontrolled release of high pressure water, natural gas, and/or crude oil up into the well bore is known as a blowout. *See id.* To reduce the chances of a blowout, a blowout preventer ("BOP") is present near the well during drilling operations. *See id.* Traditional BOPs seal off the area of the well bore around the drill pipe, often using "blind shear rams" to cut the drill pipe and seal the well. *See id.* at 1-2.

In April 2010, a blowout and catastrophic fire occurred on the Deepwater Horizon Rig at the Macondo well in the Gulf of Mexico. The BOP failed, the well

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<sup>1</sup>(...continued)  
agreed construction of the term "intermittent" in Claims 1 and 10 to mean "intermediary."

was not sealed, and oil continued to flow into the Gulf of Mexico. Numerous attempts to cap the well were unsuccessful.

During the Deepwater disaster, members of the oil and gas industry solicited ideas for a solution that would successfully seal the well. *See* Complaint [Doc. # 1], ¶ 11. On September 3, 2010, Adams filed a provisional patent application for his cap valve invention. *See id.*, ¶ 14. On September 2, 2011, Adams filed a non-provisional patent application and claimed priority based on the provisional patent application filed in 2010. *See id.* The '393 Patent issued on September 16, 2014. *See id.*

MWCC manufactures three containment systems: (1) the Subsea Containment System; (2) the 15K PSI Capping Stack, and (3) the 10K PSI Capping Stack (collectively, the “Accused Devices”). Deep Fix filed this patent infringement lawsuit on March 26, 2018, alleging that the Accused Devices infringe the claims of the '393 Patent.

Deep Fix filed its Opening Claim Construction Brief (“Opening Brief”) [Doc. # 74], MWCC filed its Responsive Brief (“Response Brief”) [Doc. # 76], and Deep Fix filed its Claim Construction Reply Brief (“Reply Brief”) [Doc. # 77]. The Court conducted a *Markman* hearing at which the parties presented evidence and argument regarding the proper construction of the disputed claim terms. The Court appreciates the parties’ presentations, particularly their answers to the Court’s questions. The

Court requested, however, that Plaintiff submit additional proposed constructions for the disputed claim terms.

After the *Markman* hearing, the parties submitted the Joint Submission re Claim Construction [Doc. # 117], Plaintiff's Supplemental Brief on Disputed Claim Terms [Doc. # 118], and Defendant's Post-*Markman* Hearing Brief on Claim Construction Issues [Doc. # 119]. Based on the parties' briefing, the full factual record, and the parties' presentations and argument in connection with the *Markman* hearing, the Court construes the disputed claim terms as follows.

## **II. GENERAL LEGAL STANDARDS FOR CLAIM CONSTRUCTION**

"It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude." *Aventis Pharm., Inc. v. Amino Chems. Ltd.*, 715 F.3d 1363, 1373 (Fed. Cir. 2013) (quoting *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (*en banc*)). The patent claims in issue must be construed as a matter of law to determine their scope and meaning. *See, e.g., Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 390 (1996), *aff'd*, 52 F.3d 967, 976 (Fed. Cir.) (*en banc*); *Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1317 (Fed. Cir. 2007).

"There is a heavy presumption that claim terms are to be given their ordinary and customary meaning." *Aventis*, 715 F.3d at 1373 (citing *Phillips*, 415 F.3d at

1312-13; *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). Therefore, Courts must “look to the words of the claims themselves . . . to define the scope of the patented invention.” *Id.* (citations omitted); *see also Summit 6, LLC v. Samsung Elec. Co., Ltd.*, 802 F.3d 1283, 1290 (Fed. Cir. 2015).

The “ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, *i.e.*, as of the effective filing date of the patent application.” *Phillips*, 415 F.3d at 1313; *see also ICU Med., Inc. v. Alaris Med. Sys., Inc.*, 558 F.3d 1368, 1374 (Fed. Cir. 2009). This “person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Phillips*, 415 F.3d at 1313; *ICU*, 558 F.3d at 1374.

Intrinsic evidence is the primary resource for claim construction. *See Power-One, Inc. v. Artesyn Techs., Inc.*, 599 F.3d 1343, 1348 (Fed. Cir. 2010) (citing *Phillips*, 415 F.3d at 1312). For certain claim terms, “the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.” *Phillips*, 415 F.3d at 1314. For other claim terms, however, the meaning of the claim

language may be less apparent. To construe those terms, the Court considers “those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean . . . [including] the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.” *Id.*

The claims “provide substantial guidance as to the meaning of particular claim terms.” *Id.* The Court may consider the context in which the terms are used and the differences among the claims. *See id.* “Because claim terms are normally used consistently throughout the patent, the usage of a term in one claim can often illuminate the meaning of the same term in other claims.” *Id.* Because the claims “are part of a fully integrated written instrument,” the Court may also consider the specification and the patent’s prosecution history. *Id.* at 1315, 1317. When the claims use different terms, “each term is presumed to have a distinct meaning.” *Primos, Inc. v. Hunter’s Specialties, Inc.*, 451 F.3d 841, 847 (Fed. Cir. 2006). “Differences among claims can also be a useful guide in understanding the meaning of particular claim terms.” *Phillips*, 415 F.3d at 1314 (citing *Laitram Corp. v. Rexnord, Inc.*, 939 F.2d 1533, 1538 (Fed. Cir. 1991)).

### **III. CONSTRUCTION OF DISPUTED CLAIM TERMS**

#### **A. Outlet Ports**

The parties dispute the claim term “outlet ports” as used in Independent Claims 1 and 10 of the ’393 Patent. The parties agree that the outlet ports are openings, and appear to agree that the outlet ports are located in the cylindrical valve chamber and in the intermittent pipe. The Court concurs that “ports” are openings and, because “ports” is plural, there are multiple openings.

The Court also finds that the outlet ports are located in the valve chamber or in the intermittent pipe. Indeed, the Detailed Description of Preferred Embodiments section of the ’393 Patent states that the outlet ports are in the cap valve (12) or in the intermittent pipe (18). *See* Detailed Description, ’393 Patent, 4:35-36. Claim 1 of the ’393 Patent similarly states that the “outlet ports” are in the cap valve (12) or in the intermittent pipe (18). *See* Claim 1, ’393 Patent, 6:25-26.

The Detailed Description provides further that the outlet ports “permit high pressure flow to continue . . .” *See* Detailed Description, ’393 Patent, 4:37-38. The ports are “outlet” ports, meaning that the flow is outward. The fluid flow through the outlet ports can be blocked. *See, e.g.*, Claim 1, ’393 Patent, 6:35-36. The outlet ports when blocked do not permit outward flow, but they can permit outward flow when open. *See, e.g.*, Detailed Description, 4:52-55 (“The primary hydraulic ram (26) has

a three way push-pull-hold functioning so that it can open and close, or be held intermittently between open and closed for an adjusted flow through openly accessed outlet ports (22)').

Based on the foregoing, the Court construes the claim term “outlet ports” in the '393 Patent to mean “multiple openings in the cylindrical valve chamber or in the intermittent pipe that can permit outward flow of high pressure fluids.”

**B. Primary Hydraulic Ram**

The “primary hydraulic ram” in Claims 1 and 10 of the '393 Patent is located in the cylindrical valve chamber. *See, e.g.*, Abstract, '393 Patent (the “valve chamber (16) contains a primary hydraulic ram (26)'). Throughout the '393 Patent, it is a single “ram.” The parties agree that the ram moves in response to fluid pressure. *See* Joint Submission [Doc. # 117], p. 2. The primary hydraulic ram moves to close or open access to the outlet ports, operating like a piston. *See* Detailed Description, '393 Patent, 4:49-54 (has a “push-pull-hold functioning” to open and close access to the outlet ports); Summary of the Invention, '393 Patent, 3:34-35 (moves “in both directions”).

Defendant argues that the word “primary” should be construed to mean “main.” *See id.* Plaintiff disagrees, but proposes a construction that removes the term “primary” from the hydraulic ram and attaches it, instead, to the “cap valve function”.



It is clear throughout the '393 Patent that the “primary” in “primary hydraulic ram” relates to the hydraulic ram. As a result, the Court rejects Plaintiff’s proposed construction.

There appears to be only one hydraulic ram in the cap valve covered by the '393 Patent. Indeed, as Adams represented to the Patent Examiner, the presence of only one ram distinguishes the cap valve covered by the '393 Patent from the traditional BOP with three rams.<sup>2</sup> *See, e.g.*, Amendment to Application for '393 Patent [Doc. # 76-5], p. 12. As a result, the Court does not adopt Defendant’s argument that “primary” means “main.”

The Court notes that the word “primary” can mean “elemental” or “basic.” *See* [www.MerriamWebster.com](http://www.MerriamWebster.com). One example is the term “primary colors.” *See id.* The “primary hydraulic ram” in the '393 Patent is a single, basic, unitary device. There is nothing in the '393 Patent that suggests that the “primary hydraulic ram” can be separated into parts. The term is always singular, and there is no description of any separable parts of the “primary hydraulic ram.” In each of the figures in which it is depicted, it is shown as a unitary device.

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<sup>2</sup>A traditional ram had two parts that would move toward each other to meet and form the seal. *See* MWCC’s Technical Tutorial, pp. 7-9.

In the same way a “primary” color cannot be separated into two colors, the “primary” hydraulic ram in the ’393 Patent cannot be separated into two parts. Based on the language and figures in the ’393 Patent, supported by the extrinsic evidence discussed above, the Court construes the term “primary hydraulic ram” in the ’393 Patent to mean “a unitary piston-like device located in the valve chamber that moves in response to fluid pressure.”

**C. To Telescopically Close or Open**

The primary hydraulic ram telescopically closes or opens access to the outlet ports. *See* Claim 1, ’393 Patent, 6:33-34; Claim 10, 8:7-8. The ram can move in two directions, either opening or closing access to the outlet ports as needed.<sup>3</sup> *See, e.g.,* Summary of the Invention, ’393 Patent, 3:34-36 (the valve functions as a “double acting piston that moves in both directions to close or to open the crude oil or gas flow as needed”).

As correctly stated by Plaintiff in connection with the “telescopically close or open” term, the primary hydraulic ram “extends to close and retracts to open.” *See* Supplemental Brief [Doc. # 118], p. 4. The Court agrees and construes the claim term

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<sup>3</sup>In at least one preferred embodiment, the ram also has a hold function so it can be “held intermittently between open and closed for an adjusted flow through openly accessed outlet ports (22).” *See* Detailed Description, ’393 Patent, 4:53-55.

“to telescopically close or open” in the ’393 Patent to mean “extend to close and retract to open.”

**D. Further Comprising**

Independent Claims 1 and 10 of the ’393 Patent claim the cap valve “comprising” various elements. The term “comprising” means that “additional components may be present in the device, but does not change the elements that are stated in the claim.” *Outside the Box Innovations, LLC v. Travel Caddy, Inc.*, 695 F.3d 1285, 1305 (Fed. Cir. 2012) (citing *Power Mosfet Techs., L.L.C. v. Siemens AG*, 378 F.3d 1396, 1409 (Fed. Cir. 2004)). The term “comprising” is synonymous with the term “including.” See *Hewlett-Packard Co. v. Repeat-O-Type Stencil Mfg. Corp.*, 123 F.3d 1445, 1451 (Fed. Cir. 1997).

Dependent Claims 3, 4, 8, 9, 13, 14, 16 and 17 relate to the cap valve identified in the independent claim, but “further comprising” additional elements. The parties agree that the additional elements are within or attached to the cap valve. The parties’ disagreement relates to the degree of attachment required.

There is nothing in the language, figures, or prosecution history of the ’393 Patent that would allow the claim term “further comprising” to include remote items that are attached to the cap valve using wires, cables, pipes, hoses, tubes, or similar connections. Independent Claims 1 and 10 identify the cap valve as “comprising” or

including certain items, such as the connector (14) and the valve hydraulic cylinder (24), which are within or directly attached to the cap valve. *See, e.g., '393 Patent*, Claim 1, 6:19; 6:30. The “further comprising” items must similarly be within or directly attached to the cap valve. *See, e.g., Outside the Box*, 695 F.3d at 1305 (although additional elements may be added to the device, they cannot change the device). As a result, the Court construes the claim term “further comprising” to mean “items that are within or directly attached to the exterior of the cap valve.”

#### **IV. CONCLUSION**

The Court has considered the intrinsic evidence in the record, as well as limited extrinsic evidence as cited herein. The Court also has considered the parties’ claim construction briefing, and the oral arguments and explanations in connection with the *Markman* hearing, which the Court found helpful and informative. Based on this consideration of the evidence and the parties’ arguments, as well as the application of governing claim construction principles, the Court construes the disputed terms in the Patents-in-Suit as set forth above and in the chart below.

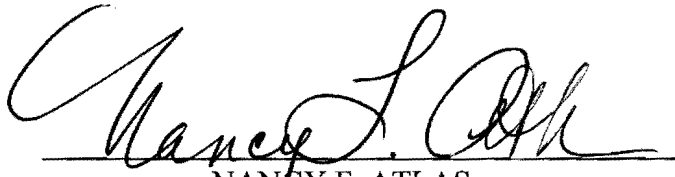
<b>Claim Term</b>	<b>Court’s Construction</b>
Outlet Ports	Multiple openings in the cylindrical valve chamber or in the intermittent pipe that can permit outward flow of high pressure fluids

Primary Hydraulic Ram	Unitary piston-like device located in the valve chamber that moves in response to fluid pressure
To Telescopically Close or Open/Telescopically	Extend to close and retract to open
Further Comprising	The items within or directly attached to the exterior of the cap valve

It is **SO ORDERED**. It is further

**ORDERED** that any Motion to Reconsider the Court's construction of any disputed claim term must be filed by **May 10, 2019**.

SIGNED at Houston, Texas, this 24<sup>th</sup> day of **April, 2019**.

  
 NANCY F. ATLAS  
 SENIOR UNITED STATES DISTRICT JUDGE